

1.4 Description of Virginia Lake

Virginia Lake was built in 1938-39 by the Works Progress Administration (WPA) under the “New Deal”. Building the lake and embankment provided jobs and income to the unemployed during the Great Depression in the United States. A fish hatchery was operated at the current site of Virginia Lake Dog Park from the time the park was created until the 1965 flood. The lake is approximately 25.5 acres, has a capacity of 208 acre/feet, and a maximum depth of 12 feet based on the Nevada Fish & Game information as shown in Figure 7. Water primarily enters the lake via the Cochran Ditch at the northwest corner of the lake and the Plumas/Moana storm drain system at the south end. *Figure 6 Existing Storm Drainage* shows the existing storm drain infrastructure and location of the outlet works. Water in Virginia Lake exits through two distinct outlet structures known as the Gloryhole spillway and the Southside Storm Drain. The Gloryhole outlet has a low level valve at the bottom of the structure that reportedly was originally designed as a low level drain. The functionality and condition of the valve is unknown and City personnel have no information on when the valve was last operated. These outlet structures are shown on Figure 6. Figures 3 through Figure 5 are excerpts from the 1964 Southside Storm Drain plans.

Virginia Lake was constructed and is operated today as a recreational lake for public use. The lake includes pedestrian/bicycle paths, park and recreation facilities and has historically been stocked with fish. Virginia Lake was not constructed as a stormwater detention facility despite the inflow of stormwater into the lake. The lake is operated as a flow through facility with water surface elevations (WSEL) controlled by the hydraulic capacity of the outlet structures. The construction of Dant Boulevard Dam in 1989 detained a large portion of the 100-year flood contribution into Virginia Lake from the Dant Boulevard watershed. According to the 1989 Kennedy/Jenks/Chilton report, the 100-year, 24-hour peak flow into Virginia Lake from the major watersheds was reduced to a peak flow of 558 cfs from a peak flow of 1,175 cfs with the construction of Dant Boulevard detention dam.

At the time of drafting this EAP for Virginia Lake, the only design information available was the 1965 Southside Storm Drain plans. Design hydrologic study's for the original 1938 design/construction or the 1965 Southside Storm Drain plans were not available nor were design plans found for the original 1938 construction for Virginia Lake.

From field visits, it appears that the Gloryhole outlet is the primary outlet with a weir crest elevation 0.5 feet below the weir crest elevation for the Southside Storm Drain structure.

Table 2 summarizes available design and construction information.

Emergency Action Plan Virginia Lake

Table 1: Design and Construction Information Summary

BACKGROUND INFORMATION

Name of Facility: Virginia Lake

Town: Reno

County: Washoe

State: Nevada

Operator: Reno City Public Works Department Maintenance & Operations (Phone 775-334-2243)

City of Reno Parks & Rec (Phone 775-334-2260)

Design Hydrologic Investigation^(a): N/A

Engineering and Design Organization^(a): Works Progress Administration (WPA)

Construction Plans^(a): N/A

Watershed Information

Major Watershed Names: Dant Boulevard Watershed, Plumas/Glenda Watershed, Lakeside/Moana Watershed, Golf Course Drainage, West Drainage, Rosewood Wash Watershed

Total Watershed Area: 4.3 sq. miles **100-Year Inflow^(b):** 558 cfs

Structure Description

Max. Water Depth^(c): 12 feet **Maximum Embankment**

Height: 7 feet at northwest corner next to Eastshore Drive

Maximum Storage Drain Time: unknown

Principal Outlet Design

Embankment Type: earthen, unknown composition

Design Capacity:

Unknown

Outlet Invert Elevation^(d):

Structure Type: Gloryhole weir outlet and Southside weir outlet

Size:

Gloryhole storm drain: size unknown Southside Storm Drain: 66" RCP

Gloryhole weir crest 4466 feet^(e)

Southside Storm Drain weir crest 4466.49 feet

(a) These documents were not available nor could be obtained during the drafting of this EAP

(b) Kennedy/Jenks/Chilton, 1989, *Supplemental Engineering Report for Plumas/Moana Storm Drain*. This report quantifies only the drainage entering the south end of the Virginia Lake. Runoff volume or peak flow was not available for the West Drainage or Rosewood Wash watersheds.

(c) Nevada Fish & Game Commission, 1954, *Virginia Lake Area-Capacity, Drawing 115*

(d)

